

Notice of Allowability

Application No.

10/063,924

Examiner

Hargobind S Sawhney

Applicant(s)

BOHLER ET AL.

Art Unit

2875

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendment filed on 3/22/2004.
2. ☒ The allowed claim(s) is/are 1, 2, 5, 7-17, 21, 22 and 25-27.
3. ☒ The drawings filed on 06 June 2003 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413),
Paper No./Mail Date 4/24/203
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

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1. The amendment filed on March 22, 2004 has been entered. Accordingly:

- Claims 1,5,11,20 and 21 have been amended;
- Claims 3,4,6,18,19,23 and 24 have been cancelled; and
- The specification has been amended.

2. On May 24, 2004, the examiner contacted the attorney, Mr. Scott A. McCollister, to inform that independent claims 1,17 and 21 include allowable subject matter, however, minor rephrasing of a few limitations would make these claims definite.

In addition, the examiner indicated the prior art: Rajasekharan et al. (US Patent No.: 5,168,537), Fisher et al. (US Patent No.: 5,029,335) Hediger et al. (US Patent No.: 4,875,057) and MacNiel (US Patent No.: 4,106,231) each meeting the amended limitations of independent Claim 20.

Mr. McCollister explained the heat transfer benefits of the axial clearance provide by reciting the core smaller than the rearward facing side of the LED assembly. It was pointed out that the axial clearance improves heat-sinking of the fixture. The examiner concurred with the above-indicated heat transfer benefits.

Based on the above- indicated discussion, Mr. McCollister authorized an examiner's amendment requiring:

- Claim 1. line 11, rephrase " disposed around" as -- surrounding--; and
- Cancel claims 20 and 28.

A copy of the interview summary is attached herewith.

Allowable Subject Matter

3. Claims 1,2,5,7-17, 21,22 and 25-27 are allowed.

The prior art of record, including Reisenaur et al. (U.S. Patent No. 6,161,910) and Garufo (German Patent No. DE 19528459 A1), does not show or suggest the applicant's invention as claimed. Specifically, the prior art of record does not disclose a light module combining:

- a plurality of appendages – fins- surrounding a thermally conductive core, and thermally communicating with a conductive spreader as recited in claims 1 and 17; and
- the thermally conductive core having lateral area less than the lateral area of the rearward facing side of an LED assembly as recited in Claim 21.

The above-indicated combination, including a plurality of heat conductive appendages -fins- surrounding a conductive core, and the core being smaller than the rearward facing side of an LED assembly, makes this invention unique.

Reisenaur et al. (U.S. Patent No. 6,161,910) and Garufo (German Patent No. DE 19528459 A1) each discloses an LED light assembly comprising a plurality of heat conductive appendages -fins- disposed on the rear surface of a thermally conductive core, rather than the fins surrounding the core as claimed by the applicant. Thermal performance resulting from the fins surrounding the core is superior than that produced by the fins disposed on only rear surface of the themally conductive core. Therefore,

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neither Reisenaur et al. (U.S. Patent No. 6,161,910) nor Garufo (German Patent No. DE 19528459 A1) meets the limitations of claims 1 and 17.

Neither combined nor individual teaching of Reisenaur et al. (U.S. Patent No. 6,161,910) and Garufo (German Patent No. DE 19528459 A1) discloses a light module comprising thermally conductive core having lateral area less than the lateral area of the rearward facing side of an LED assembly.

Therefore claims 1,17 and 21 are allowed over prior art.

Claims 2,5,7-16 are necessarily allowed because of their dependency on the allowed base Claim 1.

Claims 22 and 25-27 are necessarily allowed because of their dependency on the allowed base Claim 21.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hargobind S Sawhney whose telephone number is 703-306-5909 (After January 13, reach on 571-272-2380). The examiner can normally be reached on 6:15 - 2:45.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra O'Shea can be reached on 703-305-4939 (After January 13, reach on 571-272-2378). The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for regular communications and (703) 872-9306 for After Final communications and 703-872-9319.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number

HSS

5/24/2004



THOMAS M. SEMBER
PRIMARY EXAMINER